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warding a song, seeking through a menu and the like. In most cases, the button functions are implemented via a mechanical clicking action. The position of the buttons **112** relative to the rotational input device **110** may be widely varied. For example, they may be adjacent to one another or spaced apart. In the illustrated embodiment, the buttons **112** are configured to surround the inner and outer perimeter of the rotational input device **110**. In this manner, the buttons **112** may provide tangible surfaces that define the outer boundaries of the rotational input device **110**. As shown, there are four buttons **112A** that surround the outer perimeter and one button **112B** disposed in the center or middle of the rotational input device **110**. By way of example, the plurality of buttons **112** may consist of a menu button, play/stop button, forward seek button, reverse seek button, and the like.

[0038] Moreover, the media player **100** may also include a power switch **114**, a headphone jack **116** and a data port **118**. The power switch **114** is configured to turn the media device **100** on and off. The headphone jack **116** is capable of receiving a headphone connector associated with head-phones configured for listening to sound being outputted by the media device **100**. The data port **118** is capable of receiving a data connector/cable assembly configured for transmitting and receiving data to and from a host device, such as a general purpose computer. By way of example, the data port **118** may be used to upload or download songs to and from the media device **100**. The data port **118** may be widely varied. For example, the data port may be a PS/2 port, a serial port, a parallel port, a USB port, a FireWire port, and the like. In some cases, the data port **118** may be a radio frequency (RF) link or optical infrared (IR) link to eliminate the need for a cable. Although not shown in **FIG. 1**, the media player **100** may also include a power port that receives a power connector/cable assembly configured for delivering power to the media player **100**. In some cases, the data port **118** may serve as both a data and a power port.

[0039] **FIG. 2A** is a block diagram of a media player **200** according to one embodiment of the invention. The media player **200** can, for example, represent internal components of the media player **100**.

[0040] The media player **200** includes a processor **202** that pertains to a microprocessor or controller for controlling the overall operation of the media player **200**. The media player **200** stores media data pertaining to media items in a file system **204** and a cache **206**. The file system **204** is, typically, a storage disk or a plurality of disks. The file system typically provides high capacity storage capability for the media player **200**. However, since the access time to the file system **204** is relatively slow, the media player **200** also includes a cache **206**. The cache **206** is, for example, Random-Access Memory (RAM) provided by semiconductor memory. The relative access time to the cache **206** is substantially shorter than for the file system **204**. However, the cache **206** does not have the large storage capacity of the file system **204**. Further, the file system **204**, when active, consumes more power than does the cache **206**. The power consumption is particularly important when the media player **200** is a portable media player that is powered by a battery (not shown).

[0041] The media player **200** also includes a user input device **208** that allows a user of the media player **200** to interact with the media player **200**. For example, the user input device **208** can take a variety of forms, such as a button, keypad, dial, etc. Still further, the media player **200** includes a display **210** (screen display) that can be controlled by the processor **202** to display information to the user. A data bus **211** can facilitate data transfer between at least the file system **204**, the cache **206**, the processor **202**, and the coder/decoder (CODEC) **212**. The media player **200** can also include an audio feedback unit (not shown) to provide audio feedback for user interactions (such as with the user input device **208**).

[0042] In one embodiment, the media player **200** serves to store a plurality of media items (e.g., songs) in the file system **204**. When a user desires to have the media player play a particular media item, a list of available media items is displayed on the display **210**. Then, using the user input device **208**, a user can select one of the available media items. The processor **202**, upon receiving a selection of a particular media item, supplies the media data (e.g., audio file) for the particular media item to a coder/decoder (CODEC) **212**. The CODEC **212** then produces analog output signals for a speaker **214**. The speaker **214** can be a speaker internal to the media player **200** or external to the media player **200**. For example, headphones or earphones that connect to the media player **200** would be considered an external speaker.

[0043] **FIG. 2B** is a block diagram of a computing system **250** according to one embodiment of the invention. The computing system **250** can, for example, represent a portion of any of the computer system **50** shown in **FIG. 1A**, the media player **100** shown in **FIG. 1B**, or the media player **200** shown in **FIG. 2A**.

[0044] The computing system **250** includes a housing **252** that exposes a rotational input device **254**. The housing **252** can be a computer's housing or an input/output device's housing. The rotational input device **254** permits a user to interact with the computing system **250** through a rotational action. The rotational action results from either rotation of the rotational input device **254** itself or rotation of a stylus or user's finger about the rotational input device **254**. As examples, the rotational input device **254** can be a rotary dial (including, e.g., a navigational wheel or a scroll wheel) capable of being rotated or a touch pad capable of rotational sensing. A rotation pickup unit **256** couples to the rotational input device **254** to sense the rotational action. For example, the rotational pickup unit **256** can be optically or electrically coupled to the rotational input device **254**.

[0045] The computing system **250** further includes a processor **258**, a display **260** and an audio feedback unit **262**. Signals pertaining to the rotational action are supplied to the processor **258**. The processor **258** not only performs processing operations for application programs hosted by the computing system **250** but also can control the display **260** and the audio feedback unit **262**. Alternatively, a specialized controller or other circuitry can support the processor **258** in controlling the display **260** or the audio feedback unit **262**.

[0046] The processor **258** causes a display screen to be produced on the display **260**. In one implementation, the display screen includes a selectable list of items (e.g., media items) from which a user may select one or more of the items. By the user providing a rotational action with respect to the rotational input device **254**, the list can be scrolled